

Amendments to the Claims:

Please cancel claims 9, 19, 29-30, and 36-38. Please amend claims 1-8, 10-18, 20-28 and 31-35, and please add the following new claims 39-46. Following is a complete listing of the claims pending in the application, as amended:

1. (Currently amended) An apparatus for processing a microelectronic workpiece, the apparatus comprising:

- a workpiece support ~~adapted~~configured to hold the microelectronic workpiece;
- a processing container ~~adapted~~configured to receive the microelectronic workpiece held by the workpiece support;
- a drive mechanism connected to drive at least one of the processing container and the workpiece support holding the microelectronic workpiece relative to ~~each~~the other so that the microelectronic workpiece may be moved to a plurality of workpiece processing positions;
- a first chemical delivery system providing at least one processing fluid to the processing container for application to the microelectronic workpiece when the microelectronic workpiece is in a first one of the plurality of workpiece processing positions;
- a first chemical collector system ~~adapted~~configured to assist in at least partially removing spent processing fluid provided by the first chemical delivery system while the microelectronic workpiece is in the first one of the plurality of workpiece processing positions;
- a second chemical delivery system providing at least one processing fluid to the processing container for application to the microelectronic workpiece when the microelectronic workpiece is in a second one of the plurality of microelectronic workpiece processing positions, the second chemical delivery system directing a spray of processing fluid for initial contact with the microelectronic workpiece at an initial radial position;
- a second chemical collector system ~~adapted~~configured to assist in at least partially removing spent processing fluid provided by the second chemical

delivery system from the processing container while the microelectronic workpiece is in the second one of the plurality of microelectronic workpiece processing positions; and

a control system ~~connected~~ operatively coupled to the drive mechanism and configured to direct the drive mechanism to move the workpiece support during application of the spray from the second chemical delivery system so as to vary the radial position of the initial contact between the spray and the microelectronic workpiece.

2. (Currently amended) ~~An~~ The apparatus of ~~as claimed in claim 1, and~~ further comprising a rotor drive connected to spin the workpiece support ~~and corresponding microelectronic workpiece.~~

3. (Currently amended) ~~An~~ The apparatus of ~~as claimed in claim 1 wherein~~ the first one of the plurality of workpiece processing positions is at a first ~~vertical-level~~ within the processing container and the second one of the plurality of workpiece processing positions is at a second ~~vertical-level~~ within the processing container, the second ~~vertical-level~~ being above the first ~~vertical-level~~.

4. (Currently amended) ~~An~~ The apparatus of ~~as claimed in claim 3-1~~ wherein the first chemical collector system is disposed at a ~~vertical-level~~ of the processing container corresponding to the first one of the plurality of workplace processing positions and the second chemical collector system is disposed at a different ~~vertical-level~~ of the processing container that corresponds to the second one of the plurality of workplace processing positions.

5. (Currently amended) ~~An~~ The apparatus of ~~as claimed in claim 2-1~~ wherein the second chemical collector system collects spent processing fluid as the spent processing fluid is flung from the microelectronic workpiece during spinning of the microelectronic workpiece ~~by the rotor drive.~~

6. (Currently amended) ~~An The apparatus of as claimed in claim 5-1~~
wherein the second chemical collector system comprises:

a splash wall extending about the interior periphery of the processing container;
a further wall extending about the interior periphery of the processing container;
the splash wall and further wall defining a collection channel therebetween for
collecting the spent processing fluid of the second chemical delivery
system.

7. (Currently amended) ~~An The apparatus of as claimed in claim 6, and~~
further comprising a fluid outlet proceeding from the collection channel.

8. (Currently amended) ~~An The apparatus of as claimed in claim 1 wherein
the control system directs the drive mechanism to drive the microelectronic workpiece
to a plurality of positions as the second chemical delivery system is configured to direct
a spray of processing fluid that initially impinges on less than an entire radius of
provides the at least one processing fluid for contact with the microelectronic
workpiece.~~

9. (Cancelled)

10. (Currently amended) ~~An The apparatus of as claimed in claim 8-1~~
wherein the second chemical delivery system directs a stream of the at least one
processing fluid toward a fixed location.

11. (Currently amended) An apparatus for processing a microelectronic
workpiece, the apparatus comprising:

a workpiece support ~~adapted~~ configured to hold the microelectronic workpiece;
a processing container ~~adapted~~ configured to receive the microelectronic
workpiece held by the workpiece support;

an automated drive system connected to drive at least one of the processing container and the workpiece support holding the microelectronic workpiece relative to ~~each~~the other so that the microelectronic workpiece is moved between an initial processing position and a secondary processing position;

a chemical delivery system providing at least one stream of at least one processing fluid to the processing container for application to at least one surface of the microelectronic workpiece as the microelectronic workpiece proceeds between the initial processing position and secondary processing position, the at least one stream being directed toward a ~~central~~first portion of the at least one surface of the microelectronic workpiece when the microelectronic workpiece is in the initial processing position, the at least one stream being directed toward a peripheral second portion of the at least one surface of the microelectronic workpiece disposed radially outwardly from the first portion, when the microelectronic workpiece is in the secondary processing position; and

a control system operatively coupled to the automated drive system to direct the drive system to move the workpiece support while the chemical delivery system directs the at least one stream toward the microelectronic workpiece.

12. (Currently amended) ~~An~~The apparatus ~~of as claimed in~~ claim 11 wherein the automated drive system ~~comprises~~includes a linear actuator that drives at least one of the processing container and the workpiece support relative to ~~each~~the other along a vertically oriented drive path.

13. (Currently amended) ~~An~~The apparatus ~~of as claimed in~~ claim 11 wherein the automated drive system ~~comprises~~includes a rotational actuator that drives at least one of the processing container and the workpiece support relative to ~~each~~the other along an angular drive path.

14. (Currently amended) ~~An~~The apparatus of as claimed in claim 11, and further comprising a chemical collector system ~~adapted~~configured to remove spent processing fluid provided by the chemical delivery system as the microelectronic workpiece proceeds between the initial processing position and the secondary processing position.

15. (Currently amended) ~~An~~The apparatus of as claimed in claim 14, and further comprising:

a further chemical delivery system configured to provideing at least one processing fluid to the processing container for application to the microelectronic workpiece when the microelectronic workpiece is in a further processing position other than a position between the initial and secondary processing positions; and

a further chemical collector system ~~adapted~~configured to assist in at least partially removing spent processing fluid provided by the further chemical delivery system from the processing container while the microelectronic workpiece is in the further workpiece processing position.

16. (Currently amended) ~~An~~The apparatus of as claimed in claim 14 wherein the chemical collector system comprises:

a splash wall extending about the interior periphery of the processing container;
a further wall extending about the interior periphery of the processing container;
the splash wall and further wall defining a collection channel therebetween for collecting the spent processing fluid of the further chemical delivery system.

17. (Currently amended) ~~An~~The apparatus of as claimed in claim 11, and further comprising a rotor drive connected to spin the workpiece support and corresponding microelectronic workpiece as the microelectronic workpiece proceeds from the initial processing position to the secondary processing position.

18. (Currently amended) ~~An The apparatus of as claimed in claim 14-11, and further comprising a rotor drive connected to spin the workpiece support and corresponding microelectronic workpiece as the microelectronic workpiece proceeds from the initial processing position to the secondary processing position, wherein the chemical delivery collector system is configured to direct a stream of processing fluid that initially impinges on less than an entire radius of the microelectronic workpiece being adapted to collect spent processing fluid as the microelectronic workpiece proceeds from the initial processing position to the secondary processing position.~~

19. (Cancelled)

20. (Currently amended) An apparatus for processing a microelectronic workpiece, the apparatus comprising:

- a workpiece support ~~adapted~~ configured to hold the microelectronic workpiece;
- a processing container ~~adapted~~ configured to receive the microelectronic workpiece held by the workpiece support, the processing container being ~~adapted~~ configured for immersion processing of at least one surface of the microelectronic workpiece at a first processing portion of the processing container, and ~~adapted~~ configured for spray processing the at least one surface of the microelectronic workpiece at a second processing portion of the processing container;
- a drive mechanism connected to drive at least one of the processing container and the workpiece support holding the microelectronic workpiece relative to ~~each~~ the other so that the microelectronic workpiece may be moved to a plurality of workpiece processing positions, the plurality of workpiece processing positions including at least an immersion processing position proximate the first portion of the processing container and a spray processing position proximate the second portion of the processing container;

- a first chemical delivery system configured to provideing at least one processing fluid to the processing container for immersion processing of the at least one surface of the microelectronic workpiece when the microelectronic workpiece is at the immersion processing position;
- a first chemical collector system ~~adapted~~ configured to assist in at least partially removing spent processing fluid provided by the first chemical delivery system while the microelectronic workpiece is at the immersion processing position;
- a second chemical delivery system configured to provideing at least one processing fluid to the processing container for spray processing of the at least one surface of the microelectronic workpiece when the microelectronic workpiece is at the spray processing position, the second chemical delivery system being positioned to directing a spray of processing fluid for initial contact with the microelectronic workpiece at an initial radial position;
- a second chemical collector system ~~adapted~~ configured to assist in at least partially removing spent processing fluid provided by the second chemical delivery system from the processing container while the microelectronic workpiece is at the spray processing position; and
- a control system operatively coupled to the drive mechanism and configured ~~connected~~ to direct the drive mechanism to move the workpiece support during application of the spray from the second chemical delivery system so as to vary the radial position of the initial contact between the spray and the microelectronic workpiece.

21. (Currently amended) ~~An~~ The apparatus ~~of as claimed in claim 20~~ wherein the first processing portion of the processing container is ~~vertically below~~ the second processing portion of the processing container.

22. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 20,~~ and further comprising a rotor drive connected to spin the workpiece support ~~and corresponding microelectronic workpiece.~~

23. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 20~~ wherein the immersion processing position is at a first ~~vertical level~~ within the processing container and the spray processing position is at a second ~~vertical level~~ within the processing container, the second ~~vertical level~~ being above the first ~~vertical level~~.

24. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 22-20~~ wherein the second chemical collector system collects spent processing fluid as the spent processing fluid is flung from the microelectronic workpiece during spinning of the microelectronic workpiece ~~by the rotor drive.~~

25. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 24~~ wherein the second chemical collector system comprises:

a splash wall extending about the interior periphery of the processing container;
a further wall extending about the interior periphery of the processing container;
the splash wall and further wall defining a collection channel therebetween for
collecting the spent processing fluid of the second chemical delivery
system.

26. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 25,~~ and further comprising a fluid outlet proceeding from the collection channel.

27. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 24-20~~ wherein the drive mechanism comprises a linear actuator and wherein the control system directs the linear actuator to drive the microelectronic workpiece along a vertically oriented linear drive path between the ~~initial spray immersion processing position~~ and the ~~secondary-spray processing position.~~

28. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 21-20~~ wherein the drive mechanism comprises a rotational actuator and wherein the control system directs the rotational actuator to rotate the microelectronic workpiece along an angular drive path about a fixed rotation axis between the ~~initial spray immersion~~ processing position and the ~~secondary spray~~ processing position.

29. (Cancelled)

30. (Cancelled)

31. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 30-39~~, and further comprising a rotor drive connected to spin the workpiece support and corresponding microelectronic workpiece to thereby fling spent processing fluid into the chemical collection system.

32. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 31~~, further comprising a wherein the chemical collector system that includes~~comprises~~:

a splash wall extending about the interior periphery of the processing container;
a further wall extending about the interior periphery of the processing container;
the splash wall and further wall defining a collection channel therebetween for
collecting the spent processing fluid of the chemical delivery system.

33. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 32~~, and further comprising a fluid outlet proceeding from the collection channel.

34. (Currently amended) ~~An~~The apparatus of ~~as claimed in claim 32-39~~ wherein the control system directs the drive ~~mechanism~~system to drive the microelectronic workpiece between an initial spray processing position and a secondary spray processing position as the chemical delivery system provides the at least one ~~fixed~~-stream of processing fluid for contact with the at least one surface of the

microelectronic workpiece, the at least one fixed stream being directed toward a central first portion of the at least one surface of the microelectronic workpiece when the microelectronic workpiece is in the initial spray processing position, the at least one stream being directed toward a peripheral second portion of the at least one surface of the microelectronic workpiece disposed radially outwardly from the first position, when the microelectronic workpiece is in the secondary spray processing position.

35. (Currently amended) ~~An~~ The apparatus ~~of as claimed in claim 34~~ wherein the drive mechanism comprises a linear actuator and wherein the control system directs the linear actuator to drive the microelectronic workpiece along a vertically oriented linear drive path between the initial spray processing position and the secondary spray processing position.

36-38. (Cancelled)

39. (New) An apparatus for processing a microelectronic workpiece, comprising:

- a workpiece support configured to hold a microelectronic workpiece;
- a processing vessel configured to receive a microelectronic workpiece held by the workpiece support;
- a drive system coupled to the workpiece support to move the workpiece support along a first axis relative to the processing vessel between a first position and a second position, the drive system being configured to tilt the workpiece support relative to the vessel about a second axis generally transverse to the first axis; and
- a fluid delivery system positioned to direct at least one stream of processing fluid toward the workpiece support to impinge on a microelectronic workpiece while the workpiece support holds the microelectronic workpiece.

40. (New) The apparatus of claim 39 wherein the fluid delivery system is positioned to direct processing fluid toward the workpiece support while the workpiece support is in the first position.

41. (New) The apparatus of claim 39 wherein the fluid delivery system is positioned to direct processing fluid toward the workpiece support while the workpiece support is in both the first position and the second position.

42. (New) The apparatus of claim 39, further comprising a central system operatively coupled to the drive system to direct the drive system to move the workpiece support while the fluid delivery system directs the at least one stream of processing fluid.

43. (New) An apparatus for processing a microelectronic workpiece, comprising:

- a workpiece support configured to hold a microelectronic workpiece, the workpiece support including an electrical contact positioned to contact the microelectronic workpiece;
- a processing vessel configured to receive a microelectronic workpiece held by the workpiece support;
- a drive system coupled to the workpiece support to move the workpiece support along an axis relative to the processing vessel between a first position and a second position; and
- a fluid delivery system positioned to direct at least one stream of processing fluid toward the workpiece support to impinge on the electrical contact when the workpiece support does not hold a microelectronic workpiece.

44. (New) The apparatus of claim 43, further comprising a controller operatively coupled to the drive system and configured to direct the drive system to

move the workpiece support during application of the at least one stream of processing fluid.

45. (New) The apparatus of claim 43 wherein the workpiece support includes a seal disposed around the electrical contact, and wherein the fluid delivery system is positioned to direct at least one stream of processing fluid to impinge on the seal when the workpiece support does not hold a microelectronic workpiece.

46. (New) The apparatus of claim 43 wherein the axis is a first axis and wherein the drive system is configured to tilt the workpiece support relative to the vessel about a second axis generally transverse to the first axis.